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EXAMINER	
FERGUSON, MICHAEL P	
ART UNIT	PAPER NUMBER
3679	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/599,746	ABELS, OLAF	
	Examiner	Art Unit	
	MICHAEL P. FERGUSON	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-8,10-14 and 16-25* is/are pending in the application.

4a) Of the above claim(s) *23-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-8,10-14 and 16-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 November 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 23-25 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

This application contains claims directed to the following patentably distinct species:

Species 1, original claims 1, 3-8, 10-14 and 16-22, shown in Figures 3-9.

Species 2, new claims 23-25, shown in Figures 1 and 2.

The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. Species 1 discloses a sealing bellows wherein a portion of the reinforcing element directly engages the pivot. Species 2 discloses a sealing bellows comprising a centering element between the pivot and the pivot-side sealing area. Species 1 and 2 do not relate to a single general inventive concept and lack the same special technical feature. In addition, these species are not obvious variants of each other based on the current record.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 23-25 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

2. Claims 12 and 14 are objected to because of the following informalities:

Claim 12 (line 2) recites "approx. 50". It should recite --approximately 50--.

Claim 14 (line 13) recites "said axial projections". It should recite --said second projections--.

For the purpose of examining the application, it is assumed that appropriate correction has been made.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claim 1 (lines 12-13) recites "said axial sealing lips engaging a lug". Claim 14 (lines 1-13) recites "A sealing bellows... having a ball pivot, a lug... the lug located opposite said jacket area". The specification fails to provide proper antecedent basis and support for this claimed subject matter. Claim 1 (lines 12-13) should recite --said axial sealing lips engaging a holder--. Claim 14 (lines 1-13) should recite --A sealing bellows... having a ball pivot, a holder... the holder located opposite said jacket area--.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 5-8, 10, 11, 14 and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over ZF Lemforder Metallwaren$_1$ (WO 02/077470) in view of Budzynski (US 3,279,834).

As to claim 1, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows of a ball-and-socket joint, with a ball, a pivot **3** originating from the ball and with a housing **11** accommodating the ball, the sealing bellows extending between the pivot and the housing and the sealing bellows having comprising:

a pivot-side sealing area **2,7**;

a jacket area **1**; and

a housing-side sealing area, and the jacket area consisting of an elastomeric material, the pivot-side sealing area of the sealing bellows consisting of a pivot-side sealing area material **7** that differs from the material **1** used for the jacket area of the sealing bellows, the pivot-side sealing area material being a slidable elastomer **2**, the pivot-side sealing area comprising a radial sealing lip **10**, the radial sealing lips extending in a radial direction of the pivot, the radial sealing lips engaging the pivot in the radial direction (Figures 1-5, page 5 lines 13-14).

ZF Lemforder Metallwaren$_1$ fails to disclose a sealing bellows wherein the pivot-side sealing area comprises a plurality of radial sealing lips and axial sealing lips, each of the radial sealing lips extending in a radial direction of the pivot, each of the axial sealing lips extending in an axial direction of the pivot, each of the radial sealing lips engaging the pivot in the radial direction, the axial sealing lips engaging a holder in the axial direction on a side facing in a direction opposite the jacket area.

Budzynski teaches a sealing bellows **36** wherein a pivot-side sealing area **44** comprises radial sealing lips **46,48** and axial sealing lips **54,A** (Figure 2 reprinted below with annotations), each of the radial sealing lips extending in a radial direction of a pivot **20**, each of the axial sealing lips extending in an axial direction of the pivot, each of the radial sealing lips engaging the pivot in the radial direction, the axial sealing lips engaging a holder **10** in the axial direction on a side facing in a direction opposite a jacket area **43**; radial sealing lips **46,48** and axial sealing lips **54,A** enhance sealing properties to prevent the loss of lubricant and prevent the entry of contaminants into sealing bellows **36** (column 2 lines 52-63, Figures 1-3). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sealing bellows disclosed by ZF Lemforder Metallwaren$_1$ wherein the pivot-side sealing area comprises radial sealing lips and axial sealing lips as taught by Budzynski in order to enhance sealing properties to prevent the loss of lubricant and prevent the entry of contaminants into the sealing bellows.

As to claim 5, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows wherein the jacket area **1** has at least one reinforcing element **4**, which is arranged close to the pivot-side sealing area **2,7** (Figure 1).

As to claim 6, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows wherein the pivot-side sealing area **2,7** has at least one reinforcing element **4,5** which is arranged close to the jacket area **1** (Figure 1).

As to claim 7, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows comprising a reinforcement element **4,5** provided in at least one of the jacket area **1** and the pivot-side sealing area **2,7** wherein the reinforcing element consists of plastic and/or metal (Figure 1, page 3 lines 15-19).

As to claim 8, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows wherein the reinforcing element **4,5** is arranged rotationally symmetrically in relation to the pivot **3** (Figures 1,4).

As to claim 10, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows wherein an additional sealing element **4** is provided at least at one of the sealing areas **2,7** (Figure 1).

As to claim 11, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows wherein at least one centering element **4,5** is provided at least between the pivot **3** and the pivot-side sealing area **2,7** (Figure 1).

As to claim 14, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows of a ball-and-socket joint having a ball pivot **3**, a holder and a housing **11** accommodating a ball of the ball pivot, the sealing bellows extending between the ball pivot and the housing, the sealing bellows comprising:

a pivot-side sealing area **2,7** comprising a pivot-side sealing area surface, the pivot-side sealing area surface defining a first projection **10**, the first projection extending in a radial direction of the pivot; and

a jacket area **1**, the jacket area being formed of an elastomeric material, the pivot-side sealing area consisting of a material **7** that differs from the material **1** forming the jacket area, the pivot-side sealing area material having a coefficient of friction that is less than a coefficient of friction of the ball pivot, wherein the pivot-side sealing area material is slidable along the pivot, the first projection engaging the pivot (Figures 1-5, page 5 lines 13-14).

Lemforder Metallwaren$_1$ fails to disclose a sealing bellows wherein the pivot-side sealing area surface defines a plurality of first projections and a plurality of second projections, each of the first projections extending in a radial direction of the pivot, each of the second projections extending in an axial direction of the pivot, at least one of the first projections engaging the pivot, at least one of the axial projections engaging a side of the holder located opposite the jacket area.

Budzynski teaches a sealing bellows **36** wherein a pivot-side sealing area surface **44** defines a plurality of first projections **46,48** and a plurality of second projections **54,A**, each of the first projections extending in a radial direction of the pivot, each of the second projections extending in an axial direction of the pivot, the first projections engaging a pivot **20**, the second projections engaging a side of a holder **10** located opposite a jacket area **43**; radial projections **46,48** and axial projections **54,A** enhance sealing properties to prevent the loss of lubricant and prevent the entry of

contaminants into sealing bellows **36** (column 2 lines 52-63, Figures 1-3). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sealing bellows disclosed by ZF Lemforder Metallwaren$_1$ wherein the pivot-side sealing area comprises radial projections and axial projections as taught by Budzynski in order to enhance sealing properties to prevent the loss of lubricant and prevent the entry of contaminants into the sealing bellows.

As to claim 16, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows comprising another sealing area (constituted by a housing-side sealing area of the sealing bellows; Figure 5) adjacent to the pivot-side sealing area **2,7** at least one of the pivot-side sealing area and the another sealing area being one of non-positively connected to the jacket area, positive- lockingly connected to the jacket area and connected in substance with the jacket area (Figure 1).

As to claim 17, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows comprising a reinforcing element **4** within the jacket area **1**, the reinforcing element being arranged close to the pivot-side sealing area **2,7** (Figure 1).

As to claim 18, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows comprising a reinforcing element **4,5** within the pivot-side sealing area **2,7**, the reinforcing element being arranged close to the jacket area **1** (Figure 1).

As to claim 19, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows comprising a reinforcement element **4,5** provided in at least one of the jacket area **1** and the pivot-side sealing area **2,7** wherein the reinforcing element is formed of plastic and/or metal (Figure 1, page 3 lines 15-19).

As to claim 20, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows wherein the reinforcing element **4,5** is arranged rotationally symmetrically in relation to the ball pivot **3** (Figures 1 and 4).

As to claim 21, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows wherein the pivot-side sealing area **2,7** has a jacket-side contacting surface, the jacket area **1** having a pivot-side contacting surface, the jacket-side contacting surface engaging the pivot-side contacting surface (Figure 1).

As to claim 22, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows wherein the pivot-side sealing area **2,7** is connected to the jacket area **1** (Figure 1).

6. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over ZF Lemforder Metallwaren$_1$ in view of Budzynski as applied to claim1 above, and further in view of Turner (US 2,388,097).

As to claim 3, ZF Lemforder Metallwaren$_1$ fails to disclose a sealing bellows wherein both the pivot-side sealing area and the housing-side sealing area consist of an elastomeric material different from the material of the jacket area.

Turner teaches a sealing bellows wherein both a rod-side sealing area **12** and a housing-side sealing area **12** consist of an elastomeric material different from the material of a jacket area **10** of the sealing bellows; harder, stiffer material end-sealing areas **12** provide for a stronger seal at both ends of sealing bellows **10** and form a firm, more durable connection between the sealing areas and housings **20,21** (Figures 1-3, page 1 column 1 lines 37-53, page 2 column 1 line 45-column 2 line 3). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention

was made to modify the sealing bellows disclosed by ZF Lemforder Metallwaren$_1$ in view of Budzynski wherein both sealing areas consist of an elastomeric material different from the material of the jacket area as taught by Turner in order to provide for a stronger seal at both end sealing areas of sealing bellows and form a firm, more durable connection between the sealing areas and both the pivot and the housing.

As to claim 4, ZF Lemforder Metallwaren$_1$ discloses a sealing bellows wherein the pivot-side sealing area **2,7** has a positive-locking connection or connection in substance with the jacket area **1** (Figure 1).

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over ZF Lemforder Metallwaren$_1$ in view of Budzynski as applied to claim 1 above, and further in view of Nakamura (US 5,431,601).

As to claim 12, ZF Lemforder Metallwaren$_1$ fails to disclose a sealing bellows wherein the jacket area consists of chloroprene rubber with a hardness of approximately 50 $\pm$ 10 Shore A. ZF Lemforder Metallwaren$_1$ does not disclose any structural or functional significance as to the specific material of the jacket area, other than that the sealing bellows consists of a rubber elastomer.

Nakamura teaches a sealing bellows **B** wherein a jacket area consists of chloroprene rubber; grease resistant chloroprene rubber material providing for a more durable, stronger sealing bellows which reliably seals grease within the sealing bellows (Figure 13, column 5 lines 47-50). Nakamura does not disclose any structural or functional significance as to the specific hardness of the chloroprene rubber. Accordingly, it would have been obvious to one having ordinary skill in the art at the

time the invention was made to modify the sealing bellows disclosed by ZF Lemforder Metallwaren$_1$ in view of Budzynski wherein the jacket area consists of a chloroprene rubber as taught by Nakamura in order to provide for a more durable, stronger sealing bellows which reliably seals grease within the sealing bellows.

The applicant is reminded that the selection of a known material based upon its suitability for the intended use, wherein there is no structural or functional significance disclosed as to the specific material of an element, is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sealing bellows disclosed by ZF Lemforder Metallwaren$_1$ in view of Budzynski and Nakamura wherein the jacket area consists of a chloroprene rubber with a hardness of approximately 50 $\pm$ 10 Shore A as Nakamura does not disclose any structural or functional significance as to the specific hardness of the chloroprene rubber, as such hardness value is within the known hardness range of chloroprene rubber within the art, and as such selection of material is a design consideration within the skill of the art which would yield expected and predictable results.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over ZF Lemforder Metallwaren$_1$ in view of Budzynski as applied to claim 1 above, and further in view of ZF Lemforder Metallwaren$_2$ ((WO 02/093028).

As to claim 13, ZF Lemforder Metallwaren$_1$ fails to disclose a sealing bellows wherein at least one the sealing areas consists of a nitrile rubber with a hardness of

approximately 70 ± 10 Shore A. ZF Lemforder Metallwaren$_1$ does not disclose any structural or functional significance as to the specific material of the sealing areas, other than that the sealing bellows consists of a rubber elastomer.

ZF Lemforder Metallwaren$_2$ teaches a sealing bellows **8,11** wherein a sealing area consists of a nitrile rubber having a high Shore hardness; HNBR nitrile rubber material providing for a more durable, stronger sealing bellows (Figures 1 and 2d, page 5 lines 24-27). ZF Lemforder Metallwaren$_2$ does not disclose any structural or functional significance as to the specific hardness of the nitrile rubber. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sealing bellows disclosed by ZF Lemforder Metallwaren$_1$ in view of Budzynski wherein one of the sealing areas consists of a nitrile rubber as taught by ZF Lemforder Metallwaren$_2$ in order to provide for a more durable, stronger sealing bellows.

The applicant is reminded that the selection of a known material based upon its suitability for the intended use, wherein there is no structural or functional significance disclosed as to the specific material of an element, is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sealing bellows disclosed by ZF Lemforder Metallwaren$_1$ in view of Budzynski and ZF Lemforder Metallwaren$_2$ wherein at least one the sealing areas consists of a nitrile rubber with a hardness of approximately 70 ± 10 Shore A as ZF Lemforder Metallwaren$_2$ does not disclose any structural or functional significance as to the specific hardness of the nitrile rubber, as such hardness value is

within the known hardness range of nitrile rubber within the art, and as such selection of material is a design consideration within the skill of the art which would yield expected and predictable results.

Response to Arguments

9. Applicant's arguments with respect to claims 1, 3-8, 10-14 and 16-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. The newly added limitations of "said pivot-side sealing area comprising radial sealing lips... direction opposite said jacket area" in claims 1 (lines 9-13) and "said pivot-side sealing area surface defining a plurality of first projections... opposite said jacket area" in claim 14 (lines 4-13) necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL P. FERGUSON whose telephone number is (571)272-7081. The examiner can normally be reached on M-F (6:30am-3:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571)272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MPF
01/16/09

/Michael P. Ferguson/
Primary Examiner, Art Unit 3679